

HABITAT COMMITTEE REPORT ON CALIFORNIA CURRENT ECOSYSTEM STATUS REPORT

The Habitat Committee (HC) received an update on the California Current/Integrated Ecosystem Assessment (CCIEA) Report (Agenda Item H.1.a, CCIEA Team Report 1). The HC commends the IEA team in producing another excellent report on ecosystem conditions in the California Current, and the very informative presentations to Advisory Bodies. In particular, the HC was interested in discussion of the influence of temperature on harmful algal blooms along the coast, variability in upwelling and habitat compression, and potentially integrating additional ecosystem indicators (e.g., kelp canopy) being evaluated by other agencies. The HC also looks forward to continued efforts to refine the appendix on climate change.

In addition, Correigh Greene led a discussion on the Klamath River Fall Chinook Salmon (KRFC), Sacramento River Fall Chinook Salmon (SRFC) and Central Valley Spring Run Chinook Salmon (CVSR) stoplight productivity indicator tables, which are included in Appendix E (H.1.a, CCIEA Team Report 2). In general, 2023 showed better conditions for salmon than previous years, with relatively poor adult return and incubation conditions but improved freshwater rearing and outmigration conditions. Marine conditions were mixed.

Recent analysis of the process and metrics used to generate the stoplight table sought to ask how well productivity tracks with the indicators, whether the direction of the indicators was as assumed, and whether the correlations show stability over time. Results of those analyses indicate that some indicators correlate strongly with productivity while others don't. Those that don't might be removed from the indicators list, which would simplify the process. Overall, habitat predictors are correlated with population condition.

There is evidence for non-stationarity (change in correlation over time) for some indicators, which, unless it can be characterized and modeled, would lead to loss of predictive capacity for a given indicator. For example, in early years there was no correlation between temperature and productivity, but in recent years it has become a substantial driver of population productivity in some systems.

Moving forward, there are plans to address auto-correlation among indicators and to incorporate non-stationarity into the modeling framework. There will also be efforts to reduce the number of indicators tracked within the stoplight table. This will reduce both data input demands and analytical effort.